



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/054,125	01/22/2002	Collin A. Rich	10989-007	6416

757 7590 12/30/2003

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60611

EXAMINER

MALLARI, PATRICIA C

ART UNIT PAPER NUMBER

3736

DATE MAILED: 12/30/2003

↑

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

10/054,125

Applicant(s)

RICH ET AL.

Examiner

Patricia C. Mallari

Art Unit

3736

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7-9,11-27 and 30-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-27 and 30-35 is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Response to Amendment

Regretfully, the indicated allowability of claim 6 (now cancelled and incorporated into claims 1-5 and 7) is withdrawn. Rejections based on the references Union et al. and Wise et al. follow.

Drawings

The drawings were received on 10/14/03. These drawings are approved.

Claim Objections

Claims 21 and 32 are objected to because of the following informalities:
"wirebond" on line 2 of claim 21 and on line 3 of claim 32 should read, "wire bond".
Appropriate correction is required.

Claims 30-35 are objected to because of the following informalities: "the placing" on line 1 of each of claims 30-35 should be replaced with "placing". Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Union et al. Union discloses a microminiature sensor module comprising a substrate (semiconductor die) 22, a microminiature sensor 20 (a piezoresistive strain gauge implant, thin-film temperature compensation element, and a calibration element)

disposed on the substrate 22, a signal conditioning circuit (electronic circuitry) disposed on the substrate 22 and in electrical communication with the sensor for generating an electrical signal representing the pressure exerted on the diaphragm of the sensor 20 for transmission to a signal detection system. Union is silent as to how the substrate is attached to the sensor and the signal conditioning unit (figs. 2-6, 12a-c, and 13).

However, it would have been obvious to one of ordinary skill in the art at the time of invention to have the substrate attached to a top surface of the sensor and a side surface of the signal conditioning unit, because the applicant has not disclosed that such an orientation of the substrate, sensor, and signal conditioning unit provides an advantage, is used for a particular purpose, or solves a stated problem. In fact, on p. 9 of the specification of the instant application, the applicant cites that "the substrate can be attached to any one surface of the sensor and any different corresponding surface of the conditioning circuit, as long as the necessary electrical connections can be made between the sensor and the circuit". One of ordinary skill in the art, furthermore, would have expected the applicant's invention to perform equally well with any orientation of the substrate, sensor, and signal conditioning unit, because the relative placement of the three elements does not affect the functioning of the sensor.

Claims 1-5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wise et al. Wise describes a microminiature sensor module comprising a substrate 32, a microminiature sensor and signal condition circuit 34, 36, both disposed on the substrate 32 and in electrical communication with each other for conditioning an output signal of the sensor for transmission. The substrate 32 defines a body region

and two opposing arms having electrical contacts 60, 62, 66, and 68 (fig. 1). Wise fails to teach the substrate as attached to a top surface of the sensor and a side surface of the signal conditioning circuit.

However, it would have been obvious to one of ordinary skill in the art at the time of invention to have the substrate attached to a top surface of the sensor and a side surface of the signal conditioning unit, because the applicant has not disclosed that such an orientation of the substrate, sensor, and signal conditioning unit provides an advantage, is used for a particular purpose, or solves a stated problem. In fact, on p. 9 of the specification of the instant application, the applicant cites that “the substrate can be attached to any one surface of the sensor and any different corresponding surface of the conditioning circuit, as long as the necessary electrical connections can be made between the sensor and the circuit”. One of ordinary skill in the art, furthermore, would have expected the applicant’s invention to perform equally well the configuration of the sensor of Wise et al., because the relative placement of the three elements does not affect the functioning of the sensor.

Allowable Subject Matter

Claims 8, 9, 11-27, and 30-35 are allowed.

The following is an examiner’s statement of reasons for allowance:

Regarding the allowability of claims 8-13, and 22-25, the prior art of record fails to teach or fairly suggest a catheter system where a first sealant is disposed over a sensor module and a second sealant is subsequently disposed over the first sealant.

Regarding the allowability of claims 14-21, the prior art of record fails to teach or fairly suggest a catheter system wherein a catheter body has a circumferential wall defining first and second lumens, the wall defining at least one opening to the second lumen, and where the second lumen includes a main channel portion and first and second sub-channel portion.

Regarding the allowability of claim 26, the prior art of record fails to teach or fairly suggest a sensing catheter system comprising a u-shaped retaining member disposed in the second lumen and encaged with the first and second electrical leads to place the first and second electrical leads in electrical communication with the first and second electrical contacts.

Regarding the allowability of claims 27 and 30- 35, the prior art of record fails to teach or fairly suggest a method of fabricating a sensing catheter assembly wherein the first and second electrical leads and the catheter body are co-extruded to place the electrical leads in the second lumen.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia C. Mallari whose telephone number is (703)

605-0422. The examiner can normally be reached on Mon-Fri 9:30 am-7:00 pm
(alternate Fri. off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max F. Hindenburg can be reached on (703) 308-3130. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0858.

Robert L. Wagner
pcm

Robert L. Wagner
ROBERT L. WAGNER
PRIMARY EXAMINER